United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets (NPS Form 10-900a).**

1. Name of Property

Historic name Mossmain Overpass

Other names/site number 24YL0698/MDT Identification No. P00004057+07411

2. Location

street & number Milepost 57 on old US Highway 10 (North I-90 Frontage Road) ☐ not for publication

city of town Two miles northeast of Laurel ☒ vicinity

State Montana code MT county Yellowstone code 111 zip code 59044

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this **_X_** nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property **_X_** meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national _X_ statewide _X local

Signature of certifying official — Date

Title — State or Federal agency and bureau

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official — Date

Title — State or Federal agency and bureau

4. National Park Service Certification

I, hereby, certify that this property is: Signature of the Keeper Date of Action

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:)

Mossmain Overpass | Yellowstone County, MT
Name of Property | County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

	private
	public - Local
X	public - State
	public - Federal
	private

Category of Property
(Check only **one** box)

	building(s)
	district
	site
X	structure
	building(s)
	object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		Objects
		buildings
1	0	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

Montana's Historic Steel Stringer and Steel Girder Bridges, 1901-1961

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION/Road-related (vehicular) =
Bridge

Current Functions
(Enter categories from instructions)

TRANSPORTATION/Road-related (vehicular) =
Bridge

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: Steel girder bridge

Materials
(Enter categories from instructions)

foundation: CONCRETE, EARTH
walls:
roof:
other: CONCREATE, METAL: Steel

Narrative Description
(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Mossmain Overpass consists of one contributing structure, a three-span continuous span steel stringer bridge built in 1936. The structure is 269 feet long and 33 feet wide with massive earthen approaches that carry the roadway up over the railroad tracks. The overpass was the largest railroad overpass built by the Montana Highway Department in the 1930s and is one of the best remaining examples of the type in the state. The structure incorporates many of the aesthetic features specified by the department's engineers during the decade, specifically the haunched steel stringer. The setting of the site has changed somewhat with the construction of nearby Interstate 90 in the 1960s and commercial development in the vicinity of an interchange near the overpass. However, the structure still functions in its original capacity, and retains overall good integrity.

Narrative Description

The Mossmain Overpass is located on old US Highway 10 about two miles northeast of Laurel in Yellowstone County, Montana. The confluence of the Yellowstone and Clark's Fork rivers is about two miles south of the overpass. Interstate 90 is located just to the south which provides an excellent view of the overpass. The Pryor and Beartooth mountains dominate the landscape to the southeast and south of the structure and the rimrocks delineate the valley to the north. The area surrounding the bridge was at the bottom of the Western Interior Seaway during the Cretaceous Era about 65 million years ago. The sandstone rimrocks are the remnants of a barrier island in the sea. The Yellowstone Valley was settled by non-Indians in the late 1870s after the conclusion of the Sioux War in 1877. The Northern Pacific Railway arrived in 1882 and sparked the settlement of the valley. The railroad founded Billings in 1882 and Laurel, which was established in 1886, once served three railroads: the Northern Pacific, Great Northern, and the Chicago, Burlington & Quincy. Currently, the area surrounding the bridge is a mixture of small agricultural operations that are increasingly being encroached upon by residential, commercial and industrial development.[1]

The Mossmain Overpass is a three-span continuous steel stringer structure. The overpass is 269 feet long and is 35 feet wide with a roadway width of 33 feet. There is one 117-foot main span and two 77-foot spans over secondary railroad tracks. The bridge ends rest on stub-type reinforced concrete abutments and the bridge spans rest on two open columnar type concrete bents; the bents have chamfered openings and low concrete walls protect the bases of the features.

The steel superstructure of the bridge consists of two exterior steel girder spans cambered and strengthened with steel angle section stiffeners where they connect to the bents. Two steel I-beam stringers under the deck are also cambered at the bent connections. The steel stringers are connected at the bents by cast steel rocker bearings. The poured-in-place concrete deck is supported by steel I-beam floor beams. The stringers are also strengthened by angle section bottom lateral braces. The bridge was built in 1936 with concrete sidewalks flanking the deck and open Art Deco style concrete guardrails. The sidewalks and railings were removed in 1988 and the railings replaced with the existing Jersey Rails.

The bridge ends are reached by earth approaches containing approximately 156,961 cubic yards of soil that carry the roadway up to a maximum height of 38 feet to connect to the overpass. The road approaches the structure on top of the approach berms. The roadway is flanked by modern steel W-beam guardrails (originally the approaches had wooden post-and-cable guardrails).

Integrity
The overpass retains good integrity. In 1988, the distinctive 1930s-era concrete guardrails were removed and replaced with Jersey Rails; the structure was also widened three feet to accommodate increasing traffic demands. The modifications to the deck and guardrails, however, do not compromise the overall integrity of the structure. The unique concrete bents, abutments, approach berms, and steel girders are unaltered and continue to function in their historic capacity. The primary component of the overpass that distinguished it as an exemplary example of the Montana Highway

[1] David Alt and Donald W. Hyndman, *Roadside Geology of Montana*, (Missoula: Mountain Press Publishing, 1991), 187.

Department's policy in the 1930s to design "functional and visually appealing" bridge structures, are the configuration of the bents and the girders. As long as those components remain unmodified, the overpass retains its historic integrity.

Mossmain Overpass
Name of Property

Yellowstone County, MT
County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- [ ] A owed by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

Engineering
Transportation

Period of Significance

1936-1961

Significant Dates

1936

Significant Person

(Complete only if Criterion B is marked above)

Cultural Affiliation

Architect/Builder

Montana Highway Department
James Crick

Period of Significance (justification)

The Period of Significance for this site encompasses the construction date of the overpass and its subsequent use as an important component of US Highway 10 in Montana. The overpass is still in use.

Criteria Consideratons (explanation, if necessary)

Statement of Significance Summary Paragraph (provide a summary paragraph that includes level of signficance and applicable criteria)

The Mossmain Overpass can be listed on the National Register of Historic Places under criteria A and C. The bridge is representative of the Montana Highway Department's attempts to provide grade separation structures at important and busy at-grade railroad crossings to provide a safer roadway for motorists. It is also exemplary of the department's attempt to provide functional and visually appealing bridges on Montana's highways during the 1930s. While modifications occurred to the guardrails and the deck of the structure to accommodate current traffic demands, the distinctive cambered steel stringers and concrete bents are intact and serve to visually distinguish this structure.

Narrative Statement of Significance (provide at least **one** paragraph for each area of significance)

The Mossmain Overpass can be listed on the National Register of Historic Places under Criterion A for its association with the federal government and Montana Highway Department's program to provide overhead grade separation railroad overpass structures on roads with high traffic volume and/or dangerous at-grade railroad crossings. While the highway department relied on reinforced concrete T-beam overpasses during the early 1930s, by the time of Franklin Roosevelt's New Deal, the department turned increasingly to steel girder and stringer structures for overpasses. This bridge was part of the New Deal's Works Progress Grade Crossing program in effect from 1935 to 1937 when it was supplanted by a more ambitious program in 1938. The overpass was constructed under New Deal regulations and represents how the program was designed to maximize labor while minimizing the use of heavy machinery. The overpass also best exemplifies the department's policy of designing and building steel bridges that were both functional and visually appealing.

The overpass is also an excellent and intact example of the type of steel stringer bridge designed and built by the Montana Highway Department that functioned as overhead grade separation structures between 1935 and 1937. The overpass retains a streamlined appearance standard to all steel stringer bridges built during that period. In 1988, the Montana Department of Transportation removed the original concrete guardrails and sidewalks so that the structure could be widened to better accommodate increasing traffic demands on the frontage road between Laurel and Billings. The original guardrails were replaced by Jersey Rails. Fortunately, the rehabilitation did not include the distinctive cambered steel stringers and columnar concrete bents. These features make the bridge eligible for the National Register. The overpass is an excellent example of the type and is eligible for the National Register under Criterion C.

Engineering Significance

The Mossmain Overpass was the most massive steel railroad grade separation structure built by the Montana Highway Department during the 1930s. The structure crosses the Northern Pacific and Great Northern railway tracks at the east end of the Laurel rail yards and just west of the junction of the Great Northern's Billings & Northern Railroad with the Northern Pacific's line. Because of its association with the rail yards and the junction, the overpass crosses four tracks necessitating the long spans of the structure. The overpass incorporated a new fast-drying concrete for the bents and abutments. The overpass also incorporated the highway department's policy of designing structure's that were functional and also visually appealing. In 1938, highway department bridge designer Vere Maun wrote,

> Good appearance in bridge structures can be obtained by the choosing of the proper type, by careful arrangement and proportioning of spans, honest structural design with simple lines, and by good workmanship. In the Montana Highway Bridge Division several studies are made of a bridge, sketches made, costs of each layout estimated and other factors considered before a choice is made. Then the layout is chosen that promises the best appearance as well as the most economical and suitable structure.

The Mossmain Overpass best exemplifies the department's design policies during the Great Depression. The overpass was also an important component of the highway department's efforts to provide railroad grade separation structures at busy at-grade crossings.[2]

[2] Vere P. Maun, "Bridge Building," *The Center Line*, 1:5 (May 1938), 34

Developmental history/additional historic context information (if appropriate)

The replacement of the Yellowstone River bridge encouraged Laurel's business and civic leaders to lobby the highway commission for a new railroad overpass on U.S. Highway 10 between Laurel and Billings, which was one of the most heavily used roads in the state. To make matters worse, motorists had two dangerous at-grade crossings to traverse on what was also a very busy railroad. In July 1935, the Northern Pacific Railway and State Highway Commission designated a grade separation structure project east of Laurel as its number one priority. The overpass was one of the first to be funded under the federal government's Works Progress Grade Crossing program. Ben Ornburn completed the designs for the three-span, 269-foot steel girder structure in May 1935 according to the principals later articulated by his employee bridge designer Vere Maun: a structure that was functional and also visually appealing. On the first day of November 1935, the highway commission awarded the contract to Spokane contractor James Crick for the construction of the steel stringer overpass at the railroad's Mossmain junction.[3]

Crick began work on the overpass the following month and had completed pouring the concrete for the piers by February 1936 when cold weather forced him to suspend work for a few weeks. The contractor used a new type of quick-setting concrete for the piers and deck. During the cold weather months, he encased the concrete piers in heavy building paper and used gas burners, called salamanders, to provide heat to cure the concrete. Despite precautions, though, one of the salamanders overheated and set fire to the wooden forms on one of the piers. By March, the pier had been repaired and work proceeded rapidly on the structure and its approaches.[4]

The overpass required nearly 157,000 cubic yards of fill material for the approaches. The soil was obtained on-site by the contractor and piled to 38 feet at its maximum height. The overpass utilized over one million pounds of structural steel on the superstructure and 48 tons of reinforcing steel embedded in the 774 cubic yards of concrete needed for the piers, deck, and guardrails. The overpass carried Highway 10 a maximum of 23 feet over four Northern Pacific tracks. Crick completed the structure in May 1936, fully three months ahead of schedule.[5]

The Mossmain Overpass opened with little fanfare on May 23rd. Northern Pacific brakeman George Yerger was first to drive a non-commercial vehicle over the bridge. The *Laurel Outlook* reported that the man "derived quite a thrill from the experiences" as it provided him with an "entirely new view of the far-flung Laurel yards, which he had known intimately for many years." The overpass was the longest and most massive steel girder bridge in the state when completed. Although the double-coursed concrete guardrails were replaced by much-less appealing Jersey Rails in 1988, the elegant cambered girders and streamlined appearance of the overpass continues to make it an aesthetically pleasing structure.[6]

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

Alt, David and Donald W. Hyndman. *Roadside Geology of Montana*. (Missoula: Mountain Press Publishing, 1991).

Axline, Jon. *Conveniences Sorely Needed: Montana's Historic Highway Bridges, 1860-1956*. (Helena: Montana Historical Society, 2005).

[3] Bridge Construction File: USWPGC Project No. WPGH 228-F, Unit 1, Montana Highway Department Bridge Bureau Records, 1920-1985, Unprocessed Collection, Montana Historical Society Research Center, Helena; U.S. Bureau Wires Assent, Rail Underpass Part of Deal," *Laurel Outlook*, 31 July 1935; "Place Mossmain Overpass on List of Next Lettings," *Laurel Outlook*, 23 October 1935; "Construction Begins on Mossmain Overpass, Road Changes are Involved," *Laurel Outlook*, 4 December 1935; Maun, "Bridge Building," 34; Montana State Highway Commission Meeting Minutes, Book 6, 377, 378.

[4] Bridge Construction File; "Completion of Mossmain Overpass Hinges on Weather," *Laurel Outlook*, 12 February 1936.

[5] Bridge Construction File; "Permanent Bridge is 82% Done, Overpass Ready Soon," *Laurel Outlook*, 13 May 1936; "Overpass at Mossmain Now in Use," *Laurel Outlook*, 27 May 1936; "Completion of Mossmain Overpass Hinges on Weather."

[6] Bridge Construction File; "Overpass at Mossmain Now in Use;" Letter, William H. Larsen, Montana Department of Highways Construction Bureau, to Roger K. Scott, Federal Highway Administrator, 23 September 1988.

Mossmain Overpass — Yellowstone County, MT
Name of Property — County and State

Bridge Construction File: USWPGC Project No. WPGH 228-F, Unit 1. Montana Highway Department Bridge Bureau Records, 1920-1985. Unprocessed Collection, Montana Historical Society Research Center, Helena.

Bridge Inspection Record No. P00004057+07411. Montana Department of Transportation. Helena, Montana.

"Completion of Mossmain Overpass Hinges on Weather." *Laurel Outlook*, 12 February 1936.

"Construction Begins on Mossmain Overpass; Road Changes are Involved." *Laurel Outlook*, 4 December 1935.

Letter, William H. Larsen, Montana Department of Highways Construction Bureau, to Roger K. Scott, Federal Highway Administrator, 23 September 1988.

Maun, Vere P. "Bridge Building." *The Center Line*, 1:5 (May 1938).

Montana State Highway Commission Meeting Minutes. Montana Department of Transportation. Helena, Montana.

"Overpass at Mossmain Now in Use." *Laurel Outlook*, 27 May 1936.

"Permanent Bridge is 82% Done; Overpass Ready Soon." *Laurel Outlook*, 13 May 1936.

"Place Mossmain Overpass on List of Next Lettings." *Laurel Outlook*, 23 October 1935.

"U.S. Bureau Wires Assent, Rail Underpass Part of Deal." *Laurel Outlook*, 31 July 1935.

Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record #_____

Primary location of additional data:

____State Historic Preservation Office
__x__Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: **Montana Department of Transportation**

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 3.0
(do not include previously listed resource acreage)

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	12	678078	5061113	3			
2				4			

Verbal Boundary Description (describe the boundaries of the property)

The boundary for the Mossmain Overpass measures 270 x 35 feet and encompasses the bridge and its approaches on both sides of the Montana Rail Link tracks. The boundary is centered on the overpass.

Mossmain Overpass | Yellowstone County, MT
Name of Property | County and State

Boundary Justification (explain why the boundaries were selected)

Boundaries for the Mossmain Overpass are drawn to encompass the three spans of the structure, its immediate approaches and that portion of the Montana Rail Link tracks spanned by the overpass. The width is increased beyond the measurements of the structure to include the concrete bents and abutments.

11. Form Prepared By

name/title Jon Axline/Historian
organization Montana Department of Transportation date 10 June 2009
street & number 2701 Prospect Avenue telephone (406) 444-6258
city or town Helena state MT zip code 59620-1001
e-mail jaxline@mt.gov

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.
  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items)

Photographs:

Submit clear and descriptive black and white photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

(See Continuation Sheets)

Property Owner:

(Complete this item at the request of the SHPO or FPO.)

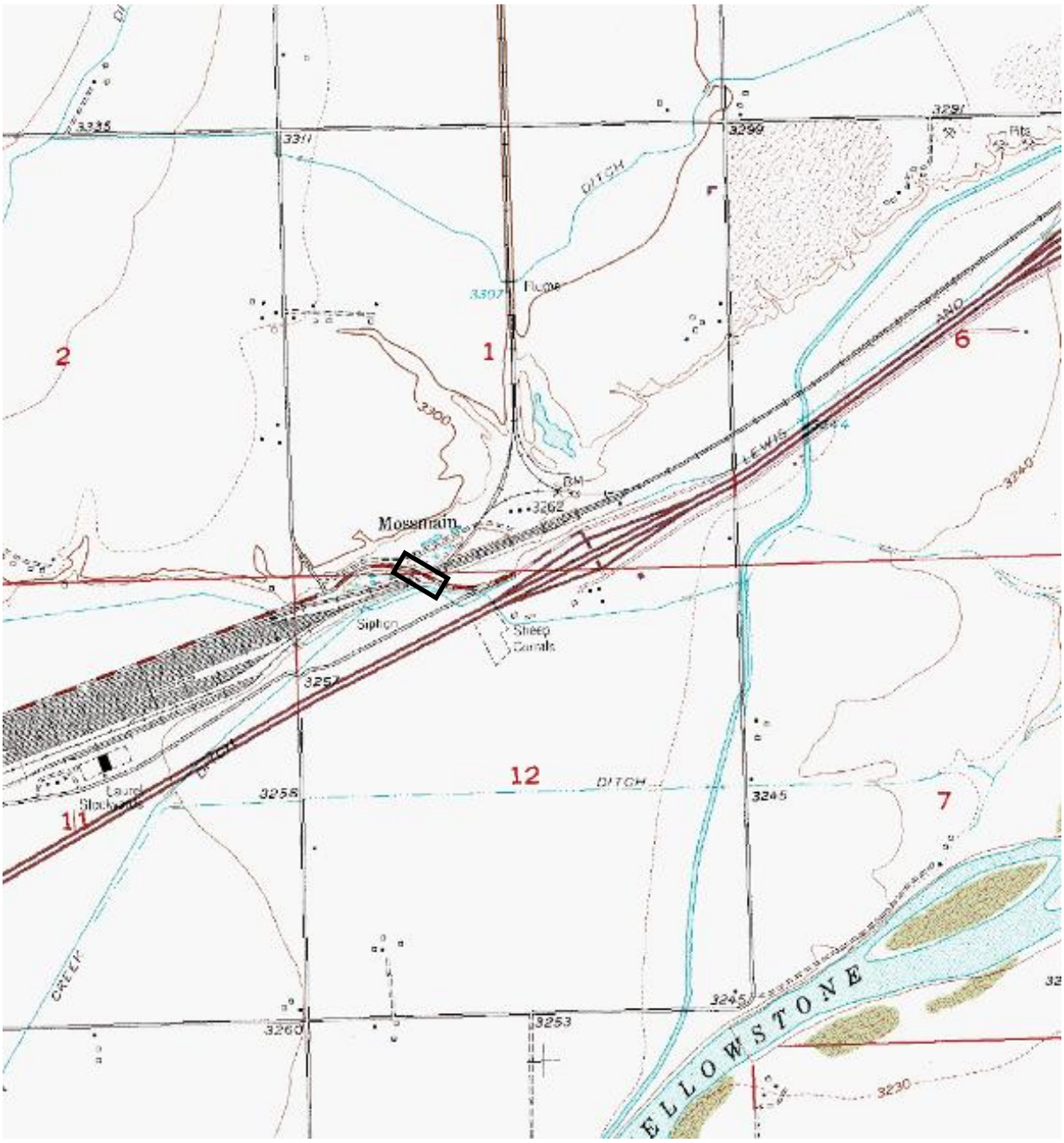
name Montana Department of Transportation
street & number 2701 Prospect Avenue telephone 406-444-6258
city or town Helena state MT zip code 59068-1001

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Mossmain Overpass
Name of Property
Yellowstone, MT
County and State
Montana's Historic Steel Stringer and Steel Girder Bridges, 1901-1961
Name of multiple listing (if applicable)

Section number Maps Page 10



Mossmain, Montana USGS Quadrangle Map, 1969

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Section number Photographs Page 11

Name: Mossmain Overpass
County and State: Yellowstone County, Montana
Photographer: Unknown
Date of Photograph: circa 1936
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: West profile. View to the east
Photograph: 0001

Name: Mossmain Overpass
County and State: Yellowstone County, Montana
Photographer: Kristi Hager
Date of Photograph: 2005
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: West Profile. View to the north
Photograph: 0002

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National Park Service

National Register of Historic Places Continuation Sheet

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Section number Photographs Page 12

Photo 0001. Historic photograph of Mossmain Overpass. West profile. View to the east.

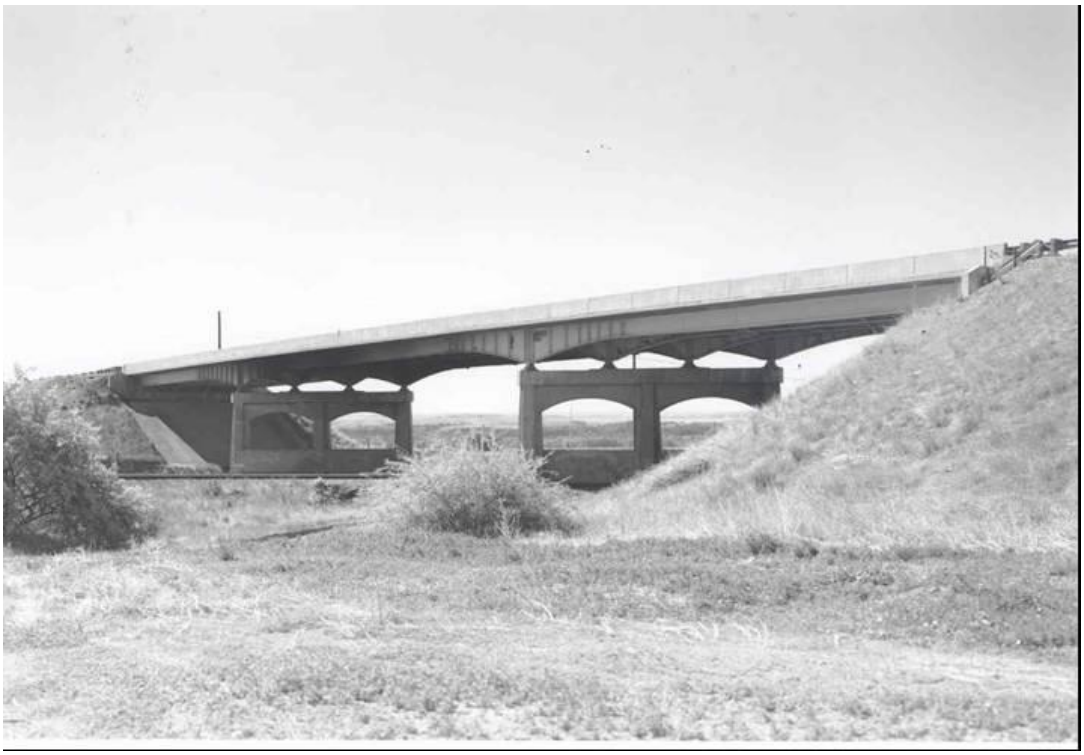

Photo 0002. Mossmain Overpass. West profile. View to north.